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# Beyond the dualism between technology and culture: an empirical research on memory practices

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**Abstract.** The growing importance of digital tools in the construction of personal remembrance seems to create the conditions for the rising of an homogeneous and “technologically driven” memory heritage.

Despite this, in the paper a strong intertwining between technological and cultural memory factors will be outlined, in particular:

- the use of digital media effectively augments individual capability to record contents, but it is also accompanied by new cultural forms of “ecology of memory”;
- cultural rules seem to influence the decision of which digital recording tool (camera phone, video camera) must be used in each social situation;
- the youngsters’ “memory heritage” is not completely digitally composed but it mixes several both physical and digital sources;
- new metaphors are emerging in order to adapt digital memory interfaces to human mnemonics and contemporary cultural trends.

**Keywords:** individual memory, social memory, digital interfaces, media, metaphors.

## 1 Introduction

In recent years, cultural theorists have observed an irreversible trend toward a so-called “mediation of memory”: the idea that media, technologies for producing, storing, retrieving contents, and memory practices increasingly merge and coil beyond distinction.

From Plato to McLuhan, through Ong’s [21], Innis’s [14], Haveloch’s [12], contributions, many scholars investigated the relation between memory and technology, within a history that includes the shift from manuscript to print culture and from orality to literacy.

The foundation myth is, in this sense, the position Plato expressed in the Fedro. Whilst questioning the positive or negative influence of writing technology in the

ancient Greek cultural system, he criticized writing itself as an external surrogate of the internal memory mental abilities, and used writing to present his pamphlet and to sharply break with the oral tradition of Socrates, his magister.

McLuhan, in particular in the Gutenberg Galaxy [20], theorized a progressive “exteriorization” of individual memory, which started with the writing era: he assessed that media work as “augmenting tools”, i.e. body extensions which allow people to extend their capability to record, access and share memories.

He argued that there have been three basic technological innovations related to three phases in the cultural and social reproduction system: the invention of the phonetic alphabet by the ancient Greeks which shifted humans out of oral patterns of speech and thought; the introduction of movable type by Gutenberg in the 16th century which accelerated this process; and the invention of electric media, which - according to the author, will ultimately transform all aspects of our social and psychic existence.

From the same School of Toronto, Walter Ong tried to define the link between cognitive, cultural issues and technological interfaces also referring to the contribution of anthropologists as Malinowski [19], Lèvi-Strauss [18] and psychology studies [16]. He focused on the changing of psychodynamics in different cultural and technological contexts and he outlined the differences between primary oral cultures and writing ones in managing and configuring their mnemonics. In particular, he argued that the primary oral cultures mind-sets, compared to the written-culture ones, were “additive rather than subordinative”, “aggregative rather than analytic”, “empathetic and participatory rather than objectively distanced” and finally “homeostatic” and based on redundancy and formulas. Through an in-depth analysis of these features in cultural productions of ancient cultures, Ong addressed how the modality with which we access, save and communicate knowledge is strongly embodied in specific socio-technical contexts.

His contribution was particularly significant for the highlight on the function of technologies as cultural interfaces and on their importance as active agents in the cultural systems.

Despite his attempt to tackle the memory and cultural reproduction issue with an interdisciplinary approach which put cultural, technological and also anthropological analysis levels in relation, several subsequent theories acknowledge the intimate relationship between memory and media, often presenting them as a set of fallacious binary oppositions.

In particular, as observed by van Dijk [27]

*there is the tendency to discern memory as an internal, physiological human capacity and media as external tools to which part of this human capability is outsourced. Adjunct to this distinction is the implicit or explicit separation of real (corporeal) and artificial (technological) memory.*

We can add to this backbone division among brain, mind and technologies the other pivotal one, related to the individual or social scale of memory: a dichotomy

which was expressed in the psychological current influenced by Bergson and Freud on one hand, and in the sociologic approach to memory on the other one.

In this sense, Halbwachs [11] and Assman [2] advocated the importance of social frames in their role of strongly configuring individual memory, contributing to the definition of a “collective” and “cultural” memory concept.

Only more recently, Silverstone and Thompson reintroduced the role of media, intended both as artifacts and as channels, as factors which strongly impact on the memory system.

Marianne Hirsch [13] uses the term “postmemory” to describe those memories inherited, not one’s own yet a part of one’s psyche; Alison Landsberg [15] defines “prosthetic memory” reminiscences that circulate through mass culture and are acquired by people for whom they have no lived experience.

Silverstone [23] outlines the influence of media stories and contents in shaping the cultural memory of contemporary societies, and stresses the conflicting nature of the relationship between individuals and mass media, both struggling in the imagery arena for the power and supremacy on memory landscape. Starting from the Adorno’s idea [1] of television as “reverse psychoanalysis” - a mean for constructing, despite of de-constructing, the layers of the unconscious - he defines media processes as “reverse historical work”: means to stratify narrations, interpretations, emotions to the past in spite of contributing to reach the essence of the reality.

Less critically than Silverstone, Thompson [25] highlights the role and the power of the individual agency in the media reception, focusing on how individual experiences are deeply interlaced with mediated ones, and observing that “mediated quasi interactions” between individuals and media characters are blurring the boundaries between private and public memory and often co-create the heritage of social and cultural items that “must” be remembered.

Actually, the passage from the electronic to the digital age, the growing importance of digital tools in the construction of personal remembrance and the ongoing capability of digital technology to store contents, seem to create the conditions for the rising of an homogeneous memory heritage, an empty space in which each individual is technologically allowed to create his/her own memory, to use it in a personalized manner and to exploit it within his/her social sphere.

Furthermore, social media and web 2.0 technologies seem to erase spatial boundaries between private and public memories, favoring the emergence of “user generated memories” which compete with, and renovate, the “official” and public ones.

In this sense, we can think of a “bottom-up memory” in which, through participatory tools as web logs, social sharing sites (as Facebook) and photo and video sharing platforms (as Youtube or Flickr), individual memories assume a central role in the public sphere to create a more democratic and participatory history if compared to the institutional one.

We could define this tendency as a “user generated” memory and many examples

and experimentations that interpret such idea can be found in the web: as, for example, the rising in America of “family legacy videos”, memory products, delivered through several channels and media, (from Youtube to pods to traditional books), that professional “personal historians” collect, package and distribute, with fee, to a wide audience.

In a McLuhan’s perspective, digital media seem to widen the spatial metaphor of “the global village” to include memory issues, promoting the idea that each one of us can create his/her memory patchwork and relate his/her biography to other pasts, without geographic limits and distinctions between private and public spaces.

Thus, such family legacy videos often link many documents, sources, interpretations that come from different places, tools and sources, mixing together private stories with main events, unknown biographies with stars and collective myths, creating a “hypertextual past” that can be spatially and temporally browsed.

Platforms such as Flickr firmly embed our memory in a culture of connectivity, a system where the powerfulness of social networking sites are gradually penetrating the core of our daily routines, continuously connecting our life, experience, past, to that of others persons and places, far away in space and time.

If this “copy/pasting” of layers, sources and styles, seems to be accepted and quite metabolized in the postmodern vision of life, as a fluid practice which concerns the processes of reconfiguring the identity in (and for) the present, it seems stranger and more complex when it is applied to the past, where meta-reflexivity agents should maintain the identity pattern more static and consistent.

The time dimension of cultural memory seems deeply reconfigured too: the distinction between present and past contents becomes often unclear: what we are posting in our Facebook wall today will remain in the next weeks, months, perhaps years... the temporal stratification of our on line identity is something not yet clearly perceived. It will become a further representational layer of our identity, a new “memory format” which merges a diachronic description (typical of structured cultural products as biographies and diaries, which perform an high meta-reflexivity level) with a spontaneous and not filtered communicative approach (peculiar of synchronous forms of communication).

In conclusion, from a too strictly technological point of view, digital technology and network environments seem act as neutral factors which impact on the individual and social memory schemes homogeneously. Thus, the web could be viewed as a “no-place” of memory and a “timeless time” [9] environment which flattens contents, identities, their temporal sedimentation and spatial coordinates.

The paper aims at empirically discussing and critically deconstructing these assumptions. Starting from a qualitative research based on 52 in-depth interviews to Italian youngsters [10], it aims at elaborating on how technologies for recording, retrieving e and re-using records impact differently on different users and cultural contexts, even in a “digital native” generation.

Focusing on specific issues of the relation between memory and technology -as

the tie between media and contingent fruition contexts, habits and technology uses - a strong intertwining between technological and cultural factors in the individual and social shaping of memory will be outlined.

In particular, some schematic assertions will be thoroughly analyzed:

- the growing presence of digital media homogeneously (in all the users typologies) augments the amount of records and memories that are produced;
- youngster generations use any type of digital tool (video camera, mobile camera phone, sound recorder) for communicating, registering, saving memories, their choices depending on contingent and external situations and not on proactive distinctions among media functions and their cultural meanings and usages;
- as the recording act, also the memory retrieving and recalling act is being more and more technologically driven.

Respect to these assumptions, a more culturally situated standpoint will be provided on technological management of memory dimensions: different users seem to perform different strategies of space and time memory management, showing diverse interpretations of digital memory tools and of their use as cultural artifacts.

Throughout these arguments, the paper aims at going beyond the classic dualism that has been outlined between ICT studies and social sciences approach on memory, discussing how media, in particular digital and multimedia tools, can be considered as influencing factors in the contemporary memory landscape, but only as a part of the agency in the memory practices, which continue to be strongly embodied in individual experiences and embedded in socio-cultural contexts.

## **2. Stop-Smile-Click on! Setting the Technologies of Self**

The idea that digital technologies provide standardised sets for creating and formatting memories is analysed and empirically discussed in the following paragraph.

One of the most diffused opinions on digital technologies, in fact, is that the growing technological access to recording tools provides an hypertrophy of memory, which consequently causes a high level of redundancy and the incapability, for people, to select and give importance to what they record.

According to this approach people - being technologically allowed to easily record whatever they want - just to do so: this opinion seems to be confirmed by common sense and perception on our own behaviour when we enthusiastically get in touch with a new technological tool, overusing it beyond practical and rational aims.

The sentence below, from M. (male, 23 y.o.) could confirm this attitude. His assertion can be considered as paradigmatic of a common typology of “tech fascinated” person:

*Memory isn't a thing that comes from me, but from all this technology that is*

*everywhere and that I use... because I use it a lot, and, at the end, it is becoming an automatic use. Nevertheless, (memory) is caused more by technology than by a real need to use it*

As M., in fact, many individuals, especially youngsters and members of the “digital natives” generation seem to use technology “per se”, as a compulsory means for augmenting and performing the present, without any strategic or expressive plan.

Recording and saving act is interpreted, in this sense, as a gesture which is entirely inscribed in the contingent and ephemeral moment, with no deep links to the future, nor, often, social or communicative aims in the present.

In fact, despite several studies [17; 24] underline the role of photography for communication and social interaction and the use of pictures as part of conversation or for confirming social bonds between friends, in this research the communication function of photography seems to be re-sized.

As several interviewed assessed, the recording act is often suggested more by an anxiety to not be living entirely the present than by a willing to preserve such present in the future.

In the liquid era [4] people need to continuously renovate their consumption practices, needs, existential horizons and, in such a cultural scenario, recording an event is a manner to multiply possible universes, uses and imageries of consumption connected with what is happening.

People must believe that, while we are living something, we are not renouncing to something else, so the recording of an event is a virtualization of the present, the transformation of the life in a product able to be exploited in many other mediated forms, according to all the possible choices, to be consumed in many other places, times, contexts.

This first interpretation of the recording act deeply outlines the link between technological practices and cultural, even existential styles, witnessing how the same technological act - the contemporary compulsory registration of the life - can be interpreted as a superficial, technologically driven behaviour or, on the contrary, as profound imago of the complex contemporary unconscious.

Furthermore, in the interviews, another type of young people that seem not to be really compromised by new technologic recording tools and not to manifest a real engagement with these growing recording opportunities, was found.

The reasons are several, as mentioned by some witnesses. A. (male, 22 y.o.) for example, claims even a “philosophical” hostility towards every act aimed at “freezing the present” in memory.

*If I must live something I will live it on my own! I don't want to stop and take a picture, to leave the moment in order to take a photo. Or I start with the idea of having to take that picture (and therefore I take it) or else I live the experience, I remember what I can and the rest is of no real interest for me.*

A strong “sense of the present” seems to be promoted as a guarantee of the genuine nature of life, combined with the trust in the human ability to naturally select what must be remembered, and with the idea that the recording gesture is already a strong act of manipulation not only of the future (what we will remember depends on what we will have recorded) but also of the present (the act of recording deeply modifies social and cultural settings of the live event).

The term “to leave the moment in order to take a photo” strongly suggests this meta-reflexivity and cultural level of interpretation on the recording practice and it highlights the attitude to be conscious and active protagonist of this choice.

Moreover, in other interviews a rather new “ecology of memory” is performed: a real time “editing of the life”, according to narrative, imaginaries, cultural expectations and habitus, a live event managing capability is expressed throughout the rigorous division of the event in different time dimensions (past, present and future) and different media registrations.

Sometimes, a rather codified language and aesthetics of the “memorable moments” seems to emerge from the words of the young people interviewed: some subjects created specific associations between the spontaneous degree of the moment itself and the medium considered most suitable to record it.

M. (male, 20 y.o) for example, reports that:

*for family memories the most suitable recording tool is the camera, instead, with friends, the best is the mobile phone – for videos and photos- that are more a “flash”.*

*If you have the camera you have already planned that a photo must be taken, mobile videos and photos are instead more of a “sketch” that happens spontaneously, things that are harder to remember and that you willingly immortalize with the mobile, even if badly, in order to reconstruct perhaps something that was created.*

As in Bordieu’s interpretation [7], photography is in this case entirely inscribed in socio-cultural rules and different tools and technologies are explicitly associated with different future uses: in one case the frame of “solemnization of familiar moments”, in the other one, quite the creation of real-time events which have sense while (and because) they are registered.

Also in this case, different technological tools are differently performed and gain sense as cultural interfaces when they are embedded in specific contexts and social frames.

If in Bordieu’s period photography was normatively associated with familiar contexts and only few eccentric users (as photo amateurs) could use it outside such standardized contexts, at present, in the digital era, the range of filmable and photographable things is strongly enlarged, and the distinction of social uses of



photography is then semiotically marked by the different tool (camera phone, or videocamera) used to record the event.

### **3 From nostalgia to the screen saver: accesses to memory in the digital age**

With the emerging of digital technologies, not only interesting changes are affecting the remembrance practices and habits, but several different approaches can also be found in relation to the processes of accessing, retrieving and reusing memories objects.

Digital contents, both those deliberately created as future memory artefacts, and the ones we inadvertently leave in our “digital life”, are increasingly occupying symbolic spaces in our life, standing out to be used as memory documents and fragments of our identity.

Contrary to other fragments of the past - as letters, diaries, hard printed, photos as well as souvenirs or old toys- those digital mementos have different chances and channels to be rediscovered and used in daily life: disembodied from physical spaces, digital artefacts became at the same time easier and more structured triggers of recall.

Indeed, people, and in particular young generations are constantly involved in digital activities and pass many hours of their life in front of a digital screen: the screen is thus becoming a tool for living and being connected to the present, but also a “shoebox” which connect them with their own past, through past photos, documents, mails, and all the other features of digital tracks.

On the other hand, digital contents in the hard-disk have no possibility to emerge from a “serendipity access”, as the casual discovering of a photo in a book, of an object in a box or under the bed: each approach to memory, in the digital field, is due to a proactive act, a voluntary gesture to search something on a folder, browse, select and finally open a file.

The magic “insight” which casually occurs with a taste, a smell, a contact with an old photo or an object, as the Proust’s Madeleine, seems now deeply reconfigured by new practices of saving, accessing, retrieving contents in the daily life.

One specific question of our empirical research was if, in this scenario, digital mementos were really substituting physical ones in configuring youngster’s memory heritage and if virtual spaces were emerging as dominant interfaces used for being in touch with the own past.

We noticed some first, interesting, differences among the interviewed youngsters in this regard.

In fact, in our sample, the individuals that have not a massive relation with media and internet consumption, consider digital interfaces as inadequate to approach a complex and deep access with their memory.

They express a sense of the past more as “nostalgia” and the need to take account of memory in order to underline the more private self dimension of one’s own life.

In this sense, the farther are memories in time and space, the more important they appear to the owners.

In their opinion, the space of memory must preserve its “aura”, that is, first of all, determined by the two dimensions of “embodiment” in specific objects, and of “distance” from ordinary spaces: two dimensions very far from digital interfaces characteristics.

For example, in such manner D. (female, 21 y.o.), - belonging to the hypo-media and network profile- describes her access to memories:

I prefer to keep photos rather than to look at them. I don’t know why. I usually keep them saved in a special place. Perhaps because I prefer to get them and to watch them all together, instead of seeing them everyday and considering them quite a habit.

*On the opposite side, A. (male, 26 y.o.) with a high media and technology consumption profile, feels perfectly at home in accessing his memories through the digital interfaces of his PC.*

*The possibility to retrieve memories in an “always on” interface does not disturb the poetry of remembrance and it can be comfortably associated to the nostalgia feeling.*

Now with digital... My pc is always on...sometimes nostalgia arrives...you open the photos and look at them...(...)

Comparing digital and analogical photos, I prefer the digital ones... perhaps because the PC is a very close tool for me... it is always on...it is always with me... I watch TV with my PC, I do everything with it, and perhaps it is closer than the living room, where I should find the right album, look for the photos...the pc is easier and it is also more immediate.

Also in this case, not a common attitude in the retrieving practices can be depicted, as different profiles with socio-cultural background perform different approaches with the past, passing from the need of a functional and always-on access to the willingness of a poetic and not ordinary contact with their memories.

#### **4. Memory no-places: passages through the digital interfaces**

The final issue of this contribute regards the new remembrance strategies and their changing related to the emergence of digital interfaces for archiving, browsing, visualizing contents.

As observed in the previous paragraphs, nor the abundance of digital tools for

recording neither the always-on interfaces for accessing memories can be considered unique factors of change in the contemporary approach to memory, as media are both a material and a social construct, and the daily practices are processes which are strongly embedded in individual identities, socio-cultural contexts, as well as the cultural capital and psychological mood of each biography and identity.

Despite this, more incisive features and homogeneous changes have been noticed, in our interviews, regarding the memory practices of fruition and experience.

As noticed by Van Dijk [27], in fact, multimedia production on DVD no longer privilege the chronologically ordered visual narrative prescribing a viewer's reading but promote browsing through a library of connected files and (sub)texts.

As also this young person interviewed (F. 22 years, female) witnesses:

*Often I don't know what I'm searching for...but I start automatically browsing and I always find something interesting...but, otherwise, when I'm really searching something precise I never find it...in particular, my photos, I let them in many and many different folders and, literally, as in Chinese boxes I don't know where they are and when I will arrive.*

From the interviews, the information architecture in the digital space continues to be perceived as really different from human minds and their functioning.

As Vannevar Bush [8] observed, human beings need more analogical, flexible and personal ways for accessing their memories.

Despite this, the top-down and hierarchical organisation in folders and subfolders continues to be the standard not only in the File Manager system but also in the photos and multimedia browsing programmes.

Recently, applications related to the web 2.0 universe, as social tagging, ranking, social bookmarking tools, allow users to enrich contents and records through analogical connections -the tags- that introduce a transversal mode to connect items.

Tags, in fact, differently both from links both from folder organisation, create a "multidimensional" structure of content and they allow to browse contents overcoming the one-to one connection structure (as in a web link) and creating a "many to many architecture" (a word can be associated with many tags and a tag can be associated with many words).

As this structure seems to favour a more rich and complex experience of approaching digital meanings, on the other hand it seems often to create confusion and disorientation and not to favour the symbolic re-elaboration and re-ordering of digital inputs.

I suggest to use the *no-place* metaphor, coined by Augé [3], in order to define those virtual spatial configurations that, similarly to the contemporary marketplaces, provide the accumulation of contents and inputs in a chaotic and entropic configuration, creating "clouds" of meanings, trends, preferences but without favouring the construction of personal, intimate paths.

Alternatively, in the last years, new emergent metaphors and content organisation tools have been experimented in order to allow users to better fit their personal experience and existential interpretation with digital interface for recording and retrieving that.

We can consider, for example, the *Itsme* Project, carried out by a group of interaction designers at Bicocca University of Milan, which aims to provide a new modality to organize and access contents through the metaphors of Story and Venue in spite of that of desktop, windows, folders one.

In this prototype, contents, digital memories as well as feed and messages coming from social sites are organized in stories, and collected in venues: the narrative pattern allow users to ordinate contents giving them a diachronic development and also, often, organizing them according to the value structures and semiotic mechanisms typical of narrative scheme: for example, using the universal progression of “equilibrium-change/obstacle-new equilibrium” in order to create a meaning path in a photo album, or using the idea of the “hero who comes towards a desire object”, in order to metaphorically describe and organize the documents collected in the development and writing of a graduate thesis.

In the web 2.0 field, projects such as *Storify* allow users to aggregate feeds from different social sites (blogs, Facebook, Twitter, and so on), to organize them in a story and giving them, in this manner, a new, metacognitive, interpretation level.

Storytelling seems to be a great paradigm in order to recreate, in the anonymous and a-centric digital world, not only clouds, but constellations of meanings and values, directions for giving and often inventing a sense in the digital browsing practices, and finally, to provide strongly recognizable memory patterns.

As in the past, through stories and narrative archetypes knowledge, technical notions as well as value systems and rules were disseminated, nowadays, in the globalization and information overload era, new digital interfaces and metaphors that remediate [6] the ancient storytelling start to be experimented in order to provide a new order, sense and also value to the digital experience and to re-connect it to human memory.

Finally, we can consider these emergent digital metaphors as interesting evidences of the growing intertwining and mutual shaping of technology, culture and anthropology in the digital interfaces and of the need to think to media processes, in a McLuhan perspective, beyond the classic disciplinary distinctions.

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